

Claims have been treated in this response with the provisional additional explanations to facilitate an understanding them. Final their editing will be coordinated with the Examiner. Since applicant's abilities to draft the claims are not perfect, he kindly asks the Examiner to help correct them.

What is claimed is:

1. (original) A space saving cooking appliance (possibly will be titled as a mini microwave oven) comprising a case, a microwave cavity, a turntable, a machine compartment, a front door for inserting and removing food, the shape of said case is based on a shape of ellipsoid (Figs. 5, 6).
2. (original) The mini macrowave oven of claim 1 wherein said ellipsoid is formed by rotation of an ellipse around its vertical axis, and said ellipse is built on two axes, vertical and horizontal, where their ratio is within 1.0 (shaping a pure spheroid, or sphere, Fig. 5) and approximately 0.5 (shaping an ellipsoid, where its horizontal axis is twice as big as a vertical).(Also read please a provisional application No. 60 / 279,292, page 1, paragraphs 2 and 3).
3. (original) The mini microwave oven of claim 1 wherein said case has a flat bottom (Figs. 5 and 15).
4. (original) The mini microwave oven of claim 1 wherein said microwave cavity comprising a flat top 13, a flat bottom 11 and a wall, said wall has a shape of cylinder 40 (Figs.13 and 14).
5. (original) The mini microwave oven of claim 1 wherein said microwave cavity comprising a flat top 13, a flat bottom 11 and a wall, said wall has a shape of the barrel 44 (Figs. 6, 15 and 16).
6. (original) The mini microwave oven of claim 1 wherein said machine compartment 400 comprising a magnetron 410, an antenna 420 and a opening (hole) 430 in a flat top 13 (Figs.13, 14, 15 and 16), said opening is located in the center of said flat top and is fit with a cylindrical metalic orifice 431 (see new-drafted Fig.17, supplied with this response).

7. (original) The mini microwave oven of claim 6 wherein said antenna 420 is inserted inside the said cylindrical metallic orifice 431 to transmit the microwaves in the form of conical bundle 421 down into the microwave cavity under angle about 170 degrees (see Figs. 13-14 and 15-16).

8. (original) The mini microwave oven of claim 7 wherein said conical bundle 421 consists of three different concentric-conical kinds of microwaves: **a-e** kind (on-wall falling), **f** kind (on-rings falling) and **g-i-g** kind (on-central-bottom falling) (see Figs. 15 and 16), which all together create a mix of a highly large number resonant modes within circular cavity, where among them the **a-e** kind create a symmetrically polarized (splitted for two sides) microwaves, which, after reflecting from the wall, again intersect in pairs inside the food, synergically oscillating its molecules in two directions.

9. (original) The mini microwave oven of claim 6 wherein a lower part of said cylindrical metallic orifice 431 (see new-drafted Fig. 17) swivels around a said antenna's vertical axis to experience continuously changing the falling and reflecting angles of said conical bundle of microwaves causing an uniform heating of food in order to sharply diminish the dependence on said turntable or even to eliminate it at all.

10. (original) The mini microwave oven of claim 5 wherein an outer part of said flat bottom 11 (Figs. 15 and 16) has a series of corrugated rings 11B to deviate the **f**-kind of microwaves into the center lower zone of the cavity where the food is mostly underheated.

11. (original) The mini microwave oven of claim 5 wherein the said barrel-shaped cavity wall 44 is built on the curve in such a way that **a-e** kind of microwaves, emitted from a single centrally located said antenna 420, would reflect and converge from said wall onto central part of said bottom 11A (**g-i-g** spot, Figs. 15, 16).

12. (original) The mini microwave oven of claim 10 wherein the center-bound slopes of said corrugated rings 11B are leant under different angles: the slopes of most centrally placed rings are more steep while the most outer ones - more slopping in order to deviate and converge all the reflected from said rings microwaves into the most low and central zone of the cavity.

An applicant's explaining note:

All three kinds of microwaves: - the falling straight down on the food from an antenna (**g-i-g**, Fig.15), the reflected from cavity wall (**a-e**) and the reflected from bottom rings (**f**), - all are directed into the central and lower part of the cavity to synergically heat the most deep and lower zones of the food which as a rule stay underheated. Only with a cylinder- or barrel-shaped cavity wall and with a single and centrally located power source swivelling over the food it can be created a highly organized (not chaotic!), multiple and symmetrically polarized system of microwaves allowing to maximally diminish the non-uniform fields inside the cavity and expel the turntable (see Figs. 13, 14, 15, 16 and 17).

Respectfully submitted

by:

Zenon Rypan
2636 W. Winona St.,
Chicago, IL 60625-2532
(773) 506-8995

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as a first class mail in an envelope addressed to:

COMMISSIONER FOR PATENTS
P. O. Box 1450
Alexandria, Virginia 22313-1450

on February 28, 2005

Zenon Rypan

(signature)